

# Caproni AP-1

Country: Bolivia

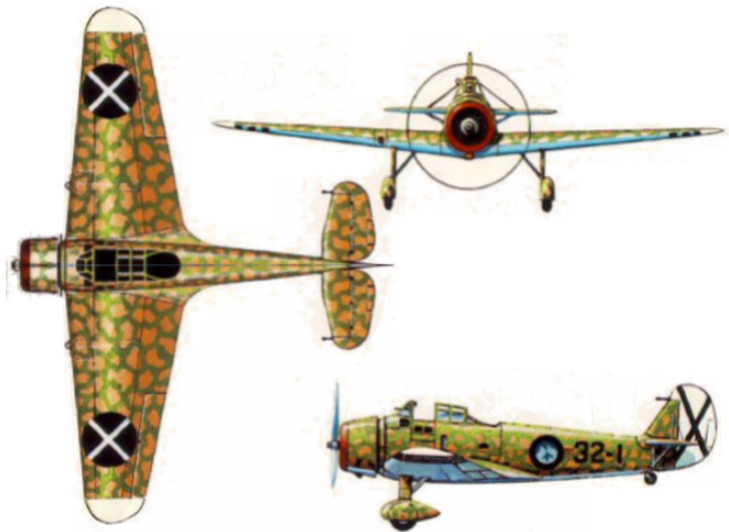
Service Entry Date: 1935

A/C Type: Attack Bomber  
 Engine(s): One Piaggio P.XI RC.35 radial  
 Eng. Pwr: 895-hp, air-cooled  
 A/C Crew: Pilot, gunner

Maximum Speed: 215 mph at 13,120 ft  
 Maximum Ceiling: 21,300 / 19,700 / 13,000 ft.  
 Defense factor: 5 Size Modifier: +0  
 Damage Factor: 7/10 Endurance: 240  
 Cockpit View: Good Blind Area: Rear,Low

Protection: Cockpit +0 Fuel +0 Engine +0  
 Climb Dece/ Dive Accel: 3.0 / 1.0  
 Weight and Load Limit: 1,100 / 2 - 4

Wpn Stations	Weight	Allowed Loads
1,3	110	1x 50 kg bomb
2 (internal)	880	4x bombs



Class: L

Victory Points: 3-5

## AIRCRAFT PERFORMANCE CHART

Altitude		Minimum	Maximum	Maximum	Min	Min	Min	Min	Altitude		Average
Levels	Bands	Speed	Speed	Dive Spd	TT(4)	HT(5)	BT(6)	ET(-)	Levels	Bands	Rate of Climb
43+	UH	--	--	--	--	--	--	--	43+	UH	--
37-42	EH	--	--	--	--	--	--	--	37-42	EH	--
31-36	VH	--	--	--	--	--	--	--	31-36	VH	--
25-30	HI	--	--	--	--	--	--	--	25-30	HI	--
19-24	MH	2.0	3.5	7.5	4.0	5.5	6.5	7.5	19-24	MH	500
13-18	ML	1.5	4.0	7.5	3.5	5.0	6.0	7.0	13-18	ML	900
7-12	LO	1.5	4.0	7.0	3.0	4.5	5.5	6.5	7-12	LO	1,200
1-6	VL	1.5	4.0	6.5	3.0	4.0	5.0	6.0	1-6	VL	1,400

## FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
W1	1x 7.7mm Breda-SAFAT	12	4
W2	1x 7.7mm Breda-SAFAT	12	4
DG	1x 7.7mm Breda-SAFAT	8	4

## GUN ATTACK FACTORS

Rng	W1	W2	DG	Total
0	5	5	3	10
1	4	4	2	8
2	3	3	1	6
3	2	2	1	4
4	1	1	1	2
5	1	1	1	2
6	--	--	--	--
7	--	--	--	--

## WEAPON STATION LOCATION



1 2 3

## POWER VERSUS SPEED CHART

		(per engine)				
Levels	Bands	1.0 - 4.5	5.0 - 7.5	8.0 - 9.5	10.0+	Band
43+	UH	--	--	--	--	UH
37-42	EH	--	--	--	--	EH
31-36	VH	--	--	--	--	VH
25-30	HI	--	--	--	--	HI
19-24	MH	3	1/1.5	--	--	MH
13-18	ML	3.5	1.5/2	--	--	ML
7-12	LO	4	1.5/2	--	--	LO
1-6	VL	5	1.5/2	--	--	VL
Banking FPs		3	4	6	--	
Side Slip FPs		4	5	7	--	

## NOTES AND VARIANTS

**DG:** Rear +30, level to high, 6:00 high only

**Caproni AP-1:** Available 1935. Italy's first single-engine military aircraft, this assault bomber was not bought by the Regia Aeronautica. Developed from the Ca.301, a one-man fighter version of the same design that was not put into production. Used at the end of the Gran Chaco War in Bolivia. Fixed gear, telescopic sight.

# Caproni Ca.310 *Libbechio*

Country: Italy

Service Entry Date: 1937

A/C Type: Recon Bomber  
 Engine(s): Two Piaggio P.VII C.35 7-cyl radials  
 Eng. Pwr: 940-hp, air-cooled, No FI  
 A/C Crew: Pilot, navigator-bombardier, gunner

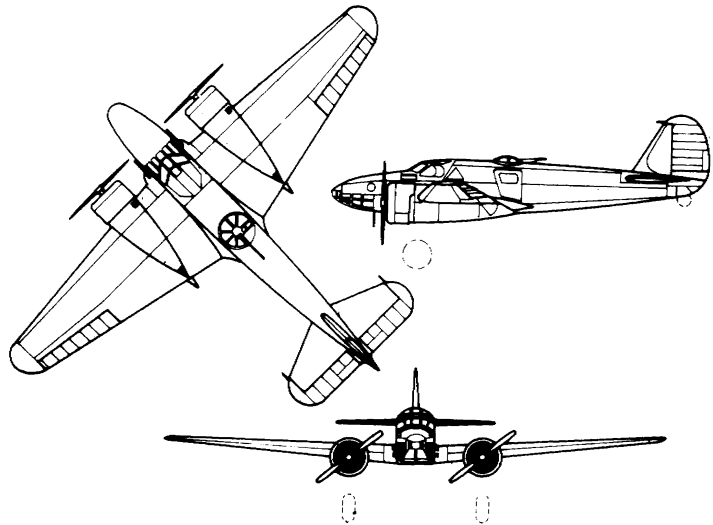
Maximum Speed: 227 mph at 9,870 ft  
 Maximum Ceiling: 22,965/12,500/10,900 ft.  
 Defense factor: 5 Size Modifier: +0  
 Damage Factor: 8/12 Endurance: 185  
 Cockpit View: Good Blind Area: Rear

Protection: Cockpit +0 Fuel +0 Engine +0

Climb Decel/ Dive Accel: 3.0 / 1.0

Weight and Load Limit: 882 / 3 - 6

Wpn Stations	Weight	Allowed Loads
1	882	4 bombs to 100 kg



Class: L

Victory Points: 4-6

## AIRCRAFT PERFORMANCE CHART

Altitude		Minimum	Maximum	Maximum	Min	Min	Min	Min	Altitude		Average
Levels	Bands	Speed	Speed	Dive Spd	TT(2)	HT(3)	BT(3)	ET(4)	Levels	Bands	Rate of Climb
43+	UH	--	--	--	--	--	--	--	43+	UH	--
37-42	EH	--	--	--	--	--	--	--	37-42	EH	--
31-36	VH	--	--	--	--	--	--	--	31-36	VH	--
25-30	HI	--	--	--	--	--	--	--	25-30	HI	--
19-24	MH	2.0	3.5	7.0	3.5	5.0	6.0	7.0	19-24	MH	300
13-18	ML	1.5	4.0	7.5	3.0	4.0	5.0	6.0	13-18	ML	700
7-12	LO	1.5	4.5	7.0	2.5	3.5	4.5	5.5	7-12	LO	1,000
1-6	VL	1.5	4.0	6.0	2.5	3.5	4.0	5.0	1-6	VL	1,200

## FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
N1	1x 7.7mm SAFAT MG	8	4
N2	1x 7.7mm SAFAT MG	8	4
DT	1x 7.7mm SAFAT MG	8	4

## GUN ATTACK FACTORS

Rng	N1	N2	DT	Total
0	5	5	4	10
1	4	4	3	8
2	3	3	2	6
3	2	2	1	4
4	1.5	1.5	1	3
5	1	1	1	2
6	--	--	--	--
7	--	--	--	--

## WEAPON STATION LOCATION



1

## POWER VERSUS SPEED CHART

(per engine)

Levels	Bands	1.0 - 4.5	5.0 - 7.5	8.0 - 9.5	10.0+	Band
43+	UH	--	--	--	--	UH
37-42	EH	--	--	--	--	EH
31-36	VH	--	--	--	--	VH
25-30	HI	--	--	--	--	HI
19-24	MH	1	--	--	--	MH
13-18	ML	1.25	--	--	--	ML
7-12	LO	1.5	--	--	--	LO
1-6	VL	1.5	--	--	--	VL
Banking FPs		3	4	6	--	
Side Slip FPs		4	5	7	--	

## NOTES AND VARIANTS

**DT:** All, level to high; 6:oclock line high only.

**Ca.309 Ghibli:** Available Oct-36. First of a series of light, twin-engine multi-purpose aircraft. This one was a "colonial bomber" where range was emphasized over bombload. A few still used as aerial ambulances and recon in 1940 Libya. 185-hp Alpha Romeo 115 engines: -0.5 pwr/engine, -0.5 max level speed. +200 roc. Turn decel 1/2/2/3. Fixed gear. 243 built

**Bomber:** Crew 2, 441 lb bombload.

**Reco:** glazed nose, add Observer, bombload 336.

**Transport:** no weapons, crew 3, 6 passenger or 600 kg cargo.

**Ca.310 Libbechio:** Available 1937. Light scout bomber. used for convoy escort and desert recon. Guns mounted in Wing-root. Sold to Yugoslavia (12), Hungary (10), Norway (4), 312 built.

# Caproni Ca.311M

A/C Type: Recon / Lt bomber  
 Engine(s): Two Piaggio P.VII C.35 7-cyl radials  
 Eng. Pwr: 1000-hp, air-cooled, No FI  
 A/C Crew: Pilot, navigator-bombardier, gunner

Maximum Speed: 227 mph at 8,200 ft  
 Maximum Ceiling: 24,200/14,000/12,300 ft.  
 Defense factor: 5 Size Modifier: +0  
 Damage Factor: 9/13 Endurance: 180  
 Cockpit View: Excel Blind Area: Rear

Protection: Cockpit+0 Fuel+0 Engine+0

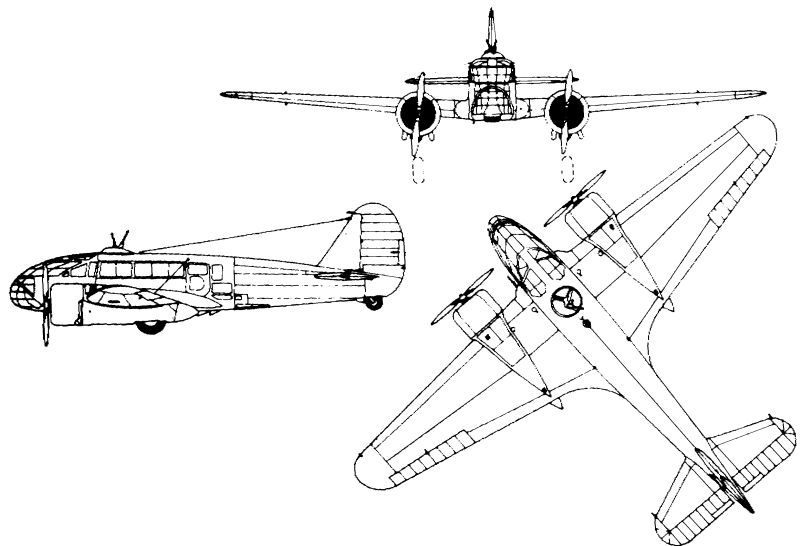
Climb Dece/ Dive Accel: 3.0 / 1.0

Weight and Load Limit: 882 / 3 - 6

Wpn Stations	Weight	Allowed Loads
1	882	4 bombs to 100 kg

Country: Italy

Service Entry Date: Nov, 1941



Class: L

Victory Points: 4-6

## AIRCRAFT PERFORMANCE CHART

Altitude		Minimum	Maximum	Maximum	Min	Min	Min	Min	Altitude		Average
Levels	Bands	Speed	Speed	Dive Spd	TT(2)	HT(3)	BT(4)	ET(5)	Levels	Bands	Rate of Climb
43+	UH	--	--	--	--	--	--	--	43+	UH	--
37-42	EH	--	--	--	--	--	--	--	37-42	EH	--
31-36	VH	--	--	--	--	--	--	--	--	VH	--
25-30	HI	--	--	--	--	--	--	--	25-30	HI	--
19-24	MH	2.0	3.5	7.0	3.5	5.0	6.0	7.0	19-24	MH	300
13-18	ML	1.5	4.0	7.5	3.0	4.0	5.0	6.0	13-18	ML	700
7-12	LO	1.5	4.5	7.0	2.5	3.5	4.5	5.5	7-12	LO	1,000
1-6	VL	1.5	4.0	6.0	2.5	3.5	4.0	5.0	1-6	VL	1,200

## FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
N1	1x 7.7mm SAFAT MG	8	4
N2	1x 7.7mm SAFAT MG	8	4
DT	1x 7.7mm SAFAT MG	8	4

## GUN ATTACK FACTORS

Rng	N1	N2	DT	Total
0	5	5	4	10
1	4	4	3	8
2	3	3	2	6
3	2	2	1	4
4	1.5	1.5	1	3
5	1	1	1	2
6	--	--	--	--
7	--	--	--	--

## WEAPON STATION LOCATION



1

## POWER VERSUS SPEED CHART

(per engine)

Levels	Bands	1.0 - 4.5	5.0 - 7.5	8.0 - 9.5	10.0+	Band
43+	UH	--	--	--	--	UH
37-42	EH	--	--	--	--	EH
31-36	VH	--	--	--	--	VH
25-30	HI	--	--	--	--	HI
19-24	MH	1	--	--	--	MH
13-18	ML	1.25	--	--	--	ML
7-12	LO	1.5	--	--	--	LO
1-6	VL	1.5	--	--	--	VL
Banking FPs		2	3	5	--	
Side Slip FPs		3	4	6	--	

## NOTES AND VARIANTS

**DT:** All, level to high; 6:oclock line high only.

**Ca.311M:** Available 1939. Glass-nosed, metal body version of Ca.310 designed for better crew visibility. Slightly more powerful engine. Guns mounted in wingroot. 322 built.

**Ca.312:** Communication & training versions. Some with stepped nose (like Ca.310); others glass fronted (Ca.312M). N1 gun only mounted in wingroot. A few to Norway. 60 built.

# Caproni Ca.313

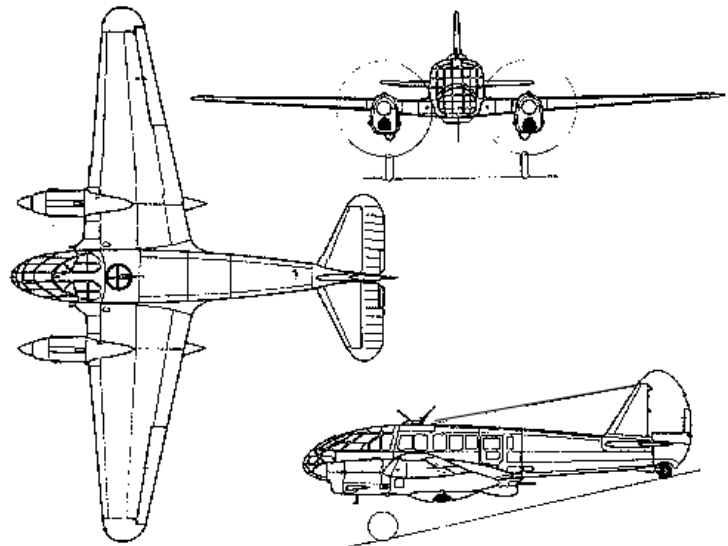
A/C Type: Recon/Lt Bomber  
 Engine(s): Two Isotta-Fraschini Delta RC.35  
 Eng. Pwr: 1420-hp, liquid-cooled, Non-F.I.  
 A/C Crew: Pilot, Radio-op/Gunner

Maximum Speed: 270 mph at 10,000 ft  
 Maximum Ceiling: 29,000/18,900/16,600 ft.  
 Defense factor: 5 Size Modifier: +0  
 Damage Factor: 9/13 Endurance: 130  
 Cockpit View: Good Blind Area: Rear,low  
 Protection: Cockpit +0 Fuel +0 Engine +0  
 Climb Dece/ Dive Accel: 3.0 / 1.0  
 Weight and Load Limit: 1,102 / 4-7

Wpn Stations	Weight	Allowed Loads
1 (bombbay)	1,102	Bombs to 250kg

Country: Italy, Sweden

Service Entry Date: May, 1940



Class: L

Victory Points: 4-6

## AIRCRAFT PERFORMANCE CHART

Altitude		Minimum	Maximum	Maximum	Min	Min	Min	Min	Altitude		Average
Levels	Bands	Speed	Speed	Dive Spd	TT(3)	HT(4)	BT(5)	ET(6)	Levels	Bands	Rate of Climb
43+	UH	--	--	--	--	--	--	--	43+	UH	--
37-42	EH	--	--	--	--	--	--	--	37-42	EH	--
31-36	VH	--	--	--	--	--	--	--	31-36	VH	--
25-30	HI	2.5	4.5	8.0	4.0	5.0	6.0	7.0	25-30	HI	400
19-24	MH	2.0	4.5	8.0	3.5	4.5	5.5	6.5	19-24	MH	700
13-18	ML	2.0	5.0	8.0	3.0	4.0	5.0	6.0	13-18	ML	1,000
7-12	LO	2.0	5.0	7.5	2.5	3.5	4.5	5.5	7-12	LO	1,200
1-6	VL	1.5	5.0	7.0	2.5	3.0	4.0	5.0	1-6	VL	1,300

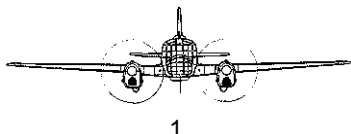
## FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
N1	One 12.7mm SAFAT mg	8	3
N2	One 12.7mm SAFAT mg	8	3
N3	One 12.7mm SAFAT mg	8	3
DT	Two 7.7mm SAFAT MG	8	4

## GUN ATTACK FACTORS

Range	N1	N2	N3	DT	Total
0	7	7	7	7	21
1	5	5	5	5	15
2	4	4	4	4	12
3	3	3	3	3	9
4	2	2	2	2	6
5	1	1	1	1	3
6	1	1	1	--	3
7	--	--	--	--	--

## WEAPON STATION LOCATION



1

## POWER VERSUS SPEED CHART

(per engine)

Levels	Bands	1.0 - 4.5	5.0 - 7.5	8.0 - 9.5	10.0+	Band
43+	UH	--	--	--	--	UH
37-42	EH	--	--	--	--	EH
31-36	VH	--	--	--	--	VH
25-30	HI	1.25	--	--	--	HI
19-24	MH	2	--	--	--	MH
13-18	ML	2.5	1	--	--	ML
7-12	LO	3	1.5	--	--	LO
1-6	VL	3	1.5	--	--	VL
Banking FPs		2	3	5	--	
Side Slip FPs		3	4	6	--	

## NOTES AND VARIANTS

DT: All, level to high; 6:oclock line high only.

**Caproni Ca.313:** Available May, 1940. Up-engined and noticeably faster. Glass nosed like 311. Unarmored. England (400) and Germany (905) ordered these in bulk, but the war intervened, cancelling delivery. Used by Italy mostly for recon and maritime patrol and escort. 3-bladed constant-speed props. N2,N3 guns mounted in wingroot. 215 built.

Sweden received 31 (of 84 ordered); designated B16 (and later S16 and Tp16 in scout and transport as it was repurposed and re-equipped).

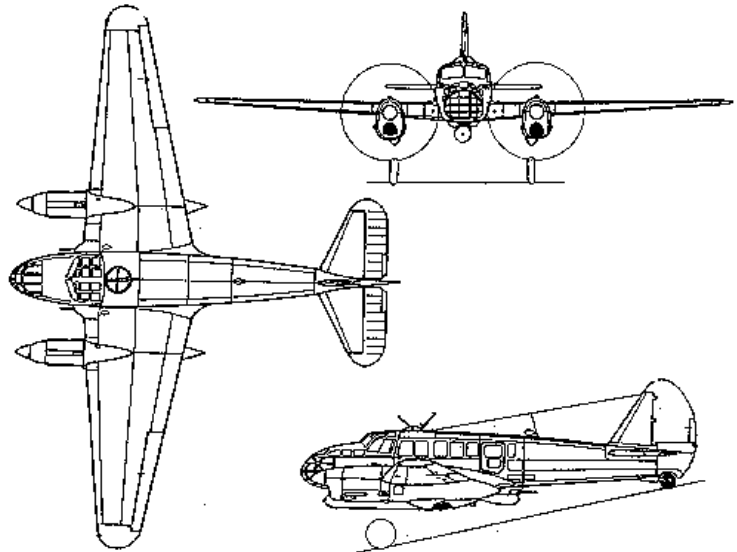
# Caproni Ca.314

A/C Type: Recon/Lt Bomber  
 Engine(s): Two Isotta-Fraschini Delta RC.35  
 Eng. Pwr: 1460-hp, liquid-cooled, Non-F.I.  
 A/C Crew: Pilot, Bombardier/Navigator,  
 Radio-op/Gunner  
 Maximum Speed: 253 mph at 10,000 ft  
 Maximum Ceiling: 27,000/16,400/14,400 ft.  
 Defense factor: 5 Size Modifier: +0  
 Damage Factor: 9/13 Endurance: 100  
 Cockpit View: Good Blind Area: Rear,low  
 Protection: Cockpit +1 Fuel +1 Engine +0  
 Climb Dece/ Dive Accel: 3.0 / 1.0  
 Weight and Load Limit: 1,900 / 4-8

Wpn Stations	Weight	Allowed Loads
1, 4 (SC only)	220 lbs	Bombs to 100 kg
2 (bombbay)	1,100 lbs	Bombs to 250 kg
3 (extern RA only)	1,900 lbs	1 45cm torpedo

Country: Italy

Service Entry Date: August, 1941



Class: L

Victory Points: 5-8

## AIRCRAFT PERFORMANCE CHART

Altitude		Minimum	Maximum	Maximum	Min	Min	Min	Min	Altitude		Average
Levels	Bands	Speed	Speed	Dive Spd	TT(3)	HT(4)	BT(5)	ET(6)	Levels	Bands	Rate of Climb
43+	UH	--	--	--	--	--	--	--	43+	UH	--
37-42	EH	--	--	--	--	--	--	--	37-42	EH	--
31-36	VH	--	--	--	--	--	--	--	31-36	VH	--
25-30	HI	2.5	4.5	8.0	3.5	5.0	6.0	7.0	25-30	HI	300
19-24	MH	2.0	4.5	8.0	3.0	4.5	5.5	6.5	19-24	MH	700
13-18	ML	2.0	5.0	8.0	3.0	4.0	5.0	6.0	13-18	ML	1,000
7-12	LO	2.0	5.0	7.5	2.5	3.5	4.5	5.5	7-12	LO	1,200
1-6	VL	1.5	4.5	7.0	2.5	3.0	4.0	5.0	1-6	VL	1,300

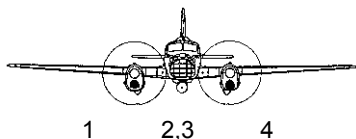
## FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
N1	One 12.7mm SAFAT mg	8	3
N2	One 12.7mm SAFAT mg	8	3
N3	One 12.7mm SAFAT mg	8	3
W1	One 12.7mm SAFAT mg	8	3
W2	One 12.7mm SAFAT mg	8	3
DG	Two 7.7mm SAFAT MG	8	4

## GUN ATTACK FACTORS

Rng	N1	N2	N3	W1	W2	DT	Total
0	7	7	7	7	7	7	21/35
1	5	5	5	5	5	5	15/25
2	4	4	4	4	4	4	12/20
3	3	3	3	3	3	3	9/15
4	2	2	2	2	2	2	6/10
5	1	1	1	1	1	1	3/5
6	1	1	1	1	1	--	3/5
7	--	--	--	--	--	--	--

## WEAPON STATION LOCATION



1 2,3 4

## POWER VERSUS SPEED CHART

Levels	Bands	1.0 - 4.5	5.0 - 7.5	8.0 - 9.5	10.0+	Band
43+	UH	--	--	--	--	UH
37-42	EH	--	--	--	--	EH
31-36	VH	--	--	--	--	VH
25-30	HI	--	--	--	--	HI
19-24	MH	1.0	--	--	--	MH
13-18	ML	1.5	0.5	--	--	ML
7-12	LO	2	0.5	--	--	LO
1-6	VL	2	--	--	--	VL
Banking FPs		2	3	5	--	
Side Slip FPs		3	4	6	--	

## NOTES AND VARIANTS

DT: All, level to high; 6:oclock line high only.

**Caproni Ca.314:** Available Aug-1941. Built in several versions. Used by both sides after 1943. Armored- but at a cost to performance. Some served into the 1950s. N2, N3 guns in wing roots.

**Caproni Ca.314SC:** *Scorte* - Convoy escort. Use N1, N2, N3(total to left of slash), DT, Stations 1,2,4. 73 built.

**Caproni Ca.314RA:** *Ricognizione Aerosiluranti:* maritime recon and torpedo bomber. Use N1, N2, N3(total to left of slash), DT, Stations 2,3. 80 built.

**Caproni Ca.314C:** *Combattimento:* assault version. Added two 12.7mm MGs underwing (W1,W2); use N1, N2, N3, W1, W2 (total to right of slash), DT, Station 2. 194 built.

# Caproni Ca.135/P.XI

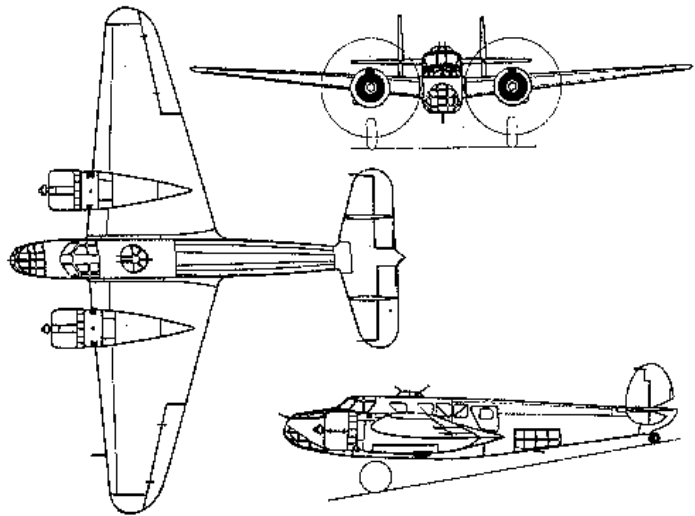
Country: Sweden

Service Entry Date: Nov 1936

A/C Type: Medium bomber  
 Engine(s): Two Piaggio P.XI RC.40 radial  
 Eng. Pwr: 1700-2000-hp, air-cooled, Non-F.I.  
 A/C Crew: Pilot, Navigator-Bombadier,  
 Radio Op, Gunner

Maximum Speed: 273 mph at 15,075 ft  
 Maximum Ceiling: 25,900/20,900/14,900 ft.  
 Defense factor: 6 Size Modifier: +1  
 Damage Factor: 11/17 Endurance: 195  
 Cockpit View: Fair Blind Area: None  
 Protection: Cockpit +1 Fuel +0 Engine +0  
 Climb Dece/ Dive Accel: 3.0 / 1.0  
 Weight and Load Limit: 3,530 / 5-8

Wpn Stations	Weight	Allowed Loads
1 (bombbay)	3530 lbs	2x 500,800 kg or 3x250 kg or 12x 50,100 kg BB or 20 kg Incend



Class: MD

Victory Points: 6-12

## AIRCRAFT PERFORMANCE CHART

Altitude Levels	Bands	Minimum Speed	Maximum Speed	Maximum Dive Spd	Min TT(3)	Min HT(4)	Min BT(-)	Min ET(-)	Altitude Levels	Bands	Average Rate of Climb
43+	UH	--	--	--	--	--	--	--	43+	UH	--
37-42	EH	--	--	--	--	--	--	--	37-42	EH	--
31-36	VH	--	--	--	--	--	--	--	31-36	VH	--
25-30	HI	2.5	4.5	8.5	4.0	5.0	--	--	25-30	HI	200
19-24	MH	2.0	5.0	8.5	3.5	4.5	--	--	19-24	MH	500
13-18	ML	2.0	5.5	8.5	3.0	4.0	--	--	13-18	ML	800
7-12	LO	1.5	5.0	7.5	2.5	4.0	--	--	7-12	LO	1,000
1-6	VL	1.5	4.5	6.5	2.5	3.5	--	--	1-6	VL	1,100

## FIRE POWER CHART

Guns	Type Weapons	Ammo	Criticals
FT	One 12.7mm SAFAT	8	3
DT	One 12.7mm SAFAT	8	3
VG	One 12.7mm SAFAT	6	3

## GUN ATTACK FACTORS

Range	FT	DT	VG	N2	Total
0	5	5	5		
1	4	4	4		
2	3	3	3		
3	2	2	2		
4	1	1	1		
5	1	1	1		
6	1	1	1		
7	--	--	--		

## WEAPON STATION LOCATION



1

## POWER VERSUS SPEED CHART

(per engine)

Levels	Bands	1.0 - 4.5	5.0 - 7.5	8.0 - 9.5	10.0+	Band
43+	UH	--	--	--	--	UH
37-42	EH	--	--	--	--	EH
31-36	VH	--	--	--	--	VH
25-30	HI	0.5/1	0.5/-	--	--	HI
19-24	MH	1/1.5	1.0/1.5	--	--	MH
13-18	ML	1/1.5	1.5/2.0	--	--	ML
7-12	LO	1.5/2	1.5/2.0	--	--	LO
1-6	VL	1.5/2	1.5/2.0	--	--	VL
Banking FPs		3	4	6	--	
Side Slip FPs		4	5	7	--	

## NOTES AND VARIANTS

### Defensive Gun Arcs

FT: 10:02, low to level  
 DT: all, level - high; 6:00 high only  
 VG: 04:08, low

**Caproni Ca.135/P.XI:** Available Nov 1936. Contemporary of Boeing B-18 and Vickers Wellington, this twin-engine bomber was rejected by the Regia Aeronautica, which preferred tri-motors. Well-received; 1 squadron bought by Bolivia (used against Ecuador in 1941); 100 bought by Hungary (used vs. USSR in 1941-2). 148 built.